Claims

[c1] A power supply circuit for conducting current from an ac voltage source to an associated electrical load comprising:

means for receiving the ac voltage source;

a first voltage storage device in series with the ac voltage source;

a second voltage storage device electrically connected to the ac voltage source;

a third voltage storage device in series with the ac voltage source;

a fourth voltage storage device in series with the second voltage storage device and electrically connected to the ac voltage source;

a fifth voltage storage device electrically connected to the second and fourth voltage storage devices; and

means for discharging the fifth voltage storage device into a load;

wherein

after receiving a first charge, the first voltage storage device, in combination with the ac voltage source, supplies a charge to the second voltage storage device;

after receiving a first charge, the third voltage storage device, in combination with the ac voltage source, supplies a charge to the fourth voltage storage device;

and

after receiving a charge each, the second and fourth voltage storage devices supply a charge to the fifth voltage storage device.

[c2] The power supply circuit of claim 1 wherein the charge to the second voltage storage device is about double the first charge, the charge to the fourth voltage storage device is about double the first charge, and the charge to the fifth voltage storage device is about four times the first charge.

[c3] The power supply circuit of claim 1 wherein the voltage storage devices are capacitors.

[c4] The power supply circuit of claim 1 wherein the means for discharging the fifth voltage storage device into a load is a dc to ac inverter.

[c5] The power supply circuit of claim 4 wherein the power supply circuit is incorporated within an electrical outlet.

[c6] The power supply circuit of claim 1 wherein the means for discharging the fifth voltage storage device into a load is a dc to ac inverter in combination with a circuit breaker box.

[c7] The power supply circuit of claim 1 wherein the power supply circuit is incorporated within the load.

[c8] The power supply circuit of claim 1 wherein the power supply

circuit is in combination with an error compensation circuit.

[c9] The power supply circuit of claim 1 wherein the means for receiving the ac voltage source is a sub-circuit producing a square wave.

[c10] The power supply circuit of claim 9 wherein the sub-circuit comprises:

means for receiving the ac voltage source;

a first sub-circuit voltage storage device in series with the ac voltage source;

a second sub-circuit voltage storage device electrically connected to the ac voltage source;

a third sub-circuit voltage storage device in series with the ac voltage source;

a fourth sub-circuit voltage storage electrically connected to the ac voltage source;

a first switching control electrically connected to the second sub-circuit voltage storage device; and

a second switching control electrically connected to the fourth sub-circuit voltage storage device;

wherein

after receiving a first charge, the first sub-circuit voltage storage device, in combination with the ac voltage source, supplies a charge to the second sub-circuit voltage storage device;

after receiving a first charge, the third sub-circuit voltage storage device, in combination with the ac voltage source, supplies a charge to the fourth sub-circuit voltage storage device; and

the first switching control and second switching control are synchronized such that when one is on, the other is off.

[c11] The power supply circuit of claim 10 wherein the first and second switching control each comprise a transformer coupling the ac voltage source to a switch for switching the switching control to its conducting condition.

[c12] The power supply circuit of claim 11 wherein the switch is a transistor.

[c13] The power supply circuit of claim 10 wherein the charge to the second sub-circuit voltage storage device is about double the first charge and the charge to the fourth sub-circuit voltage storage device is about double the first charge.

[c14] The power supply circuit of claim 10 wherein the sub-circuit voltage storage devices are capacitors.

[c15] A method for producing increased energy savings comprising the steps of:

electrically connecting an ac voltage source to an energy savings circuit; and

electrically connecting the energy savings circuit to a load;

wherein the energy savings circuit includes

means for receiving the ac voltage source;

a first voltage storage device in series with the ac voltage source;

a second voltage storage device electrically connected to the ac voltage source;

a third voltage storage device in series with the ac voltage source;

a fourth voltage storage device in series with the second voltage storage device and electrically connected to the ac voltage source;

a fifth voltage storage device electrically connected to the second and fourth voltage storage devices; and

means for discharging the fifth voltage storage device into a load;

wherein

after receiving a first charge, the first voltage storage device, in combination with the ac voltage source, supplies a charge to the second voltage storage device;

after receiving a first charge, the third voltage storage device, in combination with the ac voltage source, supplies a charge to the fourth voltage storage device; and

after receiving a charge each, the second and fourth voltage storage devices supply a charge to the fifth voltage storage device.

[c16] The method of claim 15 wherein the charge to the second voltage storage device is about double the first charge, the charge to the fourth voltage storage device is about double the first charge, and the charge to the fifth voltage storage device is about four times the first charge.

[c17] The method of claim 15 wherein the voltage storage devices are capacitors.

[c18] The method of claim 15 wherein the means for discharging the fifth voltage storage device into a load is a dc to ac inverter.

[c19] The method of claim 15 wherein the means for receiving the ac voltage source is a sub-circuit producing a square wave.

[c20] The method of claim 19 wherein the sub-circuit comprises:
means for receiving the ac voltage source;
a first sub-circuit voltage storage device in series with the ac voltage source;
a second sub-circuit voltage storage device electrically connected to the ac voltage source;
a third sub-circuit voltage storage device in series with the ac voltage source;
a fourth sub-circuit voltage storage electrically connected to

the ac voltage source;

a first switching control electrically connected to the second sub-circuit voltage storage device; and

a second switching control electrically connected to the fourth sub-circuit voltage storage device;

wherein

after receiving a first charge, the first sub-circuit voltage storage device, in combination with the ac voltage source, supplies a charge to the second sub-circuit voltage storage device;

after receiving a first charge, the third sub-circuit voltage storage device, in combination with the ac voltage source, supplies a charge to the fourth sub-circuit voltage storage device; and

the first switching control and second switching control are synchronized such that when one is on, the other is off.

[c21] The method of claim 20 wherein the first and second switching control each comprise a transformer coupling the ac voltage source to a switch for switching the switching control to its conducting condition.

[c22] The method of claim 21 wherein the switch is a transistor.

[c23] The method of claim 20 wherein the charge to the second sub-circuit voltage storage device is about double the first charge

and the charge to the fourth sub-circuit voltage storage device is about double the first charge.

[c24] The method of claim 20 wherein the sub-circuit voltage storage devices are capacitors.

[c25] The method of claim 15 further including the step of electrically connecting an error compensation circuit between the ac voltage source and the energy savings circuit.